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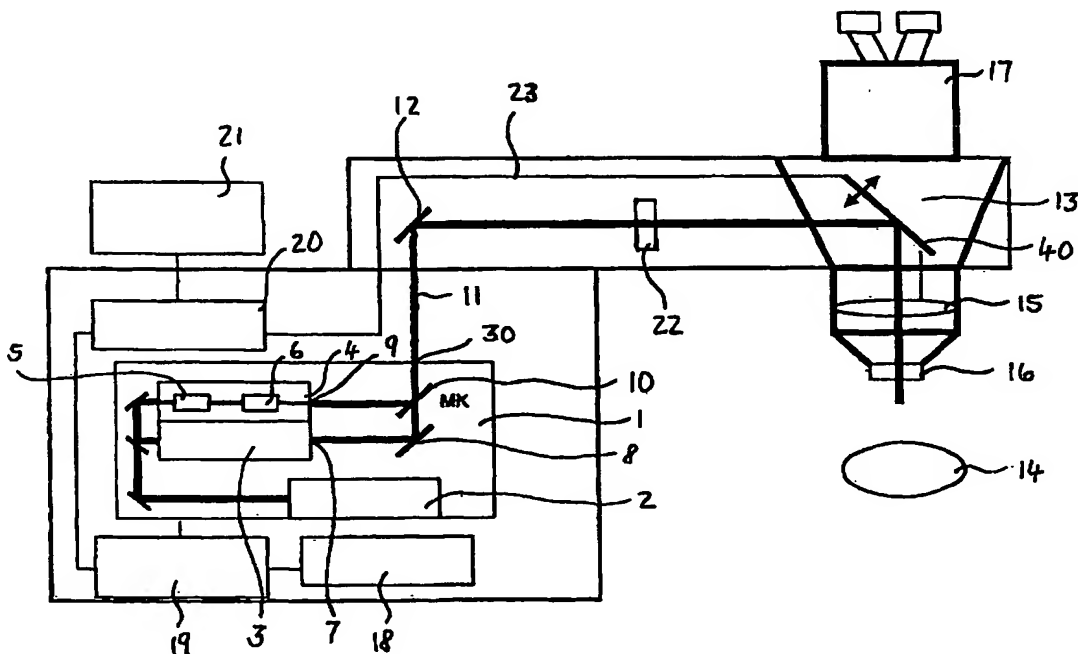
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- Declaration under Rule 4.17:  
— of inventorship (Rule 4.17(iv)) for US only
- Published:  
— with international search report

[Continued on next page]

(54) Title: DEVICE AND PROCEDURE FOR REFRACTIVE LASER SURGERY



(57) Abstract: The invention involves a device and a procedure for refractive laser surgery on a target object. With the aid of a laser beam source (3), an fs-impulse laser beam is generated. A second laser beam source (4) generates a UV laser beam. A shared scanner device (13) utilises the fs-impulse laser beam and the UV laser beam for the scanning of the target object.



(88) Date of publication of the international search report:  
18 March 2004

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 03/00136

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61F9/01 G02F1/35

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61F G02F H01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, BIOSIS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 144 630 A (LIN J T) 1 September 1992 (1992-09-01) column 4, line 21 - column 8, line 6; figures	1-3, 5-9
A	EP 1 138 291 A (INTRALASE CORP) 4 October 2001 (2001-10-04) column 6, line 2 - line 32	1, 2, 6, 10
A	EP 1 159 986 A (LAI SHUI T) 5 December 2001 (2001-12-05) abstract; figure 1	1, 4, 11



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- \*&\* document member of the same patent family

Date of the actual completion of the international search

13 August 2003

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 03/00136

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 13-21  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/00136

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5144630	A	01-09-1992	AT 162667 T	15-02-1998
			AU 660049 B2	08-06-1995
			AU 2581992 A	02-03-1993
			CA 2074749 A1	30-01-1993
			DE 69224197 D1	26-02-1998
			DE 69224197 T2	20-08-1998
			EP 0597044 A1	18-05-1994
			ES 2111649 T3	16-03-1998
			JP 6509445 T	20-10-1994
			WO 9303523 A1	18-02-1993
EP 1138291	A	04-10-2001	CA 2331223 A1	27-09-2001
			EP 1138291 A2	04-10-2001
			JP 2001276112 A	09-10-2001
EP 1159986	A	05-12-2001	EP 1159986 A2	05-12-2001
			AT 218904 T	15-06-2002
			AU 671607 B2	05-09-1996
			AU 3069792 A	07-06-1993
			AU 698453 B2	29-10-1998
			AU 7416096 A	27-02-1997
			CA 2123008 A1	13-05-1993
			DE 69232640 D1	18-07-2002
			DE 69232640 T2	06-02-2003
			EP 0614388 A1	14-09-1994
			JP 5508504 T	25-11-1993
			JP 7503382 T	13-04-1995
			WO 9308877 A1	13-05-1993
			US 6210401 B1	03-04-2001
			US 6325792 B1	04-12-2001
			US 2001010003 A1	26-07-2001